

CLAIMS

1. A method of producing an electronic document using a plurality of pieces of physical media having a common position location pattern marked thereupon, comprising the steps of:
 - (i) marking a first piece of the physical media using a digital pen, said pen being arranged to acquire data to enable the determination of the location of a tip thereof upon physical media from the position location pattern marked thereupon;
 - 10 (ii) acquiring data relating to strokes and the location of the strokes of the pen upon the first piece of the physical media sequentially, and storing said data in a memory ;
 - (iii) acquiring data relating to strokes and the location of the strokes of the pen upon a second piece of the physical media sequentially, and storing said data in a memory; and
 - 15 (iv) arranging the data stored in steps (ii) and (iii) to form at least one electronic document in which the data relating to the first piece of physical media is distinguishable from the data relating to the second piece of physical media.
- 20 2. The method of claim 1 wherein the first and second pieces of physical media are sheets or pages, and which method further comprises creating a page division marker in pen-acquired data by making a gesture with the pen upon the first page of physical media indicative of termination of use of the first page of a document.
- 25 3. The method of claim 1 wherein the first and second pieces of physical media are sheets or pages and which further comprises creating an end of electronic document division marker in pen-acquired data by making a gesture with the pen upon a page, the gesture coding for an end of electronic document signal.

4. The method of claim 2 comprising using a processor to identify the marker and closing a first file in memory associated with the first page or document pursuant to recognition of the page or document division marker.
5. 5. The method of claim 4 comprising opening a second file in the memory associated with the second page or document pursuant to closure of the first file.
6. The method of claim 1 comprising storing the data acquired in step (ii) in a short term memory in the pen initially and transferring said data to a protected, longer term, storage memory prior to the commencement of step (iii).
7. The method of claim 6 wherein the protected memory is in the pen.
8. The method of claim 6 comprising clearing the short term memory before the commencement of step (iii).
9. The method of claim 1 comprising associating a time stamp with the position of the pen relative to the pattern.
10. The method of claim 9 wherein step (iv) comprises arranging the data stored in steps (ii) and (iii) in order of the time stamp.
- 25 11. The method of claim 1 comprising partitioning pen-acquired data into different files prior to transmitting the data off-pen.
12. The method of claim 1 comprising transferring the data stored in steps (ii) and (iii) to a remote, off-pen, processor unit prior to step (iv).
- 30 13. A digital pen adapted for use with a page of position-determining pattern, the pen having:

a memory;

a pattern position capturer adapted to capture data relating to the position of the pen in relation to a said pattern and to store pen position data in a memory;

5 a clock adapted to produce time signals; and wherein

the pen has a processor having software adapted to associate time signals with the pen position data and to evaluate pen position with time to determine when a user has finished marking a first physical page and begins marking a second physical page having the same pattern, and to

10 either:

(i) create a page end marker in the pen-captured data; or

(ii) store pen-acquired data from different physical pages, each having the same pattern, in different electronic files in the memory of the pen.

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14. A pen according to claim 13 wherein the processor has software adapted to store pen-acquired data in a first memory of the pen and to transfer the data to a file in a second, protected, memory of the pen upon the determination of a page end.

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15. A pen according to claim 14 wherein the processor has software adapted to erase the first memory pursuant to transfer of pen-acquired data previously stored there to the protected memory.

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16. A pen according to claim 13 in which the processor has software adapted to cause the pen-acquired data relating to successive physical pages, each having the same pattern, to be stored in either:

(i) the same file in memory; or

(ii) different respective files, one per physical page, in memory.

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17. A pen according to claim 14 in which the processor has software adapted to cause the pen-acquired data relating to successive physical pages, each having the same pattern, to be stored in either:

- 5 (i) the same file in memory; or
- 5 (ii) different respective files, one per physical page, in memory.

18. A pen according to claim 15 in which the processor has software adapted to cause the pen-acquired data relating to successive physical pages, each having the same pattern, to be stored in either:

- 10 (i) the same file in memory; or
- (ii) different respective files, one per physical page, in memory.

19. Software, optionally encoded upon a machine-readable storage medium, which when executed upon a processor causes the processor to:

- 15 (i) receive a first signal, indicative of the position of a pen upon a first piece of physical media having printed thereupon a position location pattern that is common with a second piece of physical media;
- (ii) receive a second signal indicative of strokes, and the location of said strokes, of the pen upon the second piece of physical media; and
- 20 (iii) use the first and second signals to produce a digital document.

20. Software according to claim 19 which causes the processor to separate data derived from the first and second signals into separate memory files.